Other uses for Status Network data include quantification of spatial and temporal water quality changes, TMDL modeling and permitting, and support/nonsupport of designated use. Long-term use of these data will allow FDEP to determine what analytes are changing over time and at what rate.

Statewide data are also available by request on CD-ROM. There is no charge for this service. Also available on the Internet and CD-ROM is the Generalized Water Information System (GWIS3), a free data retrieval and reporting software package which works with the supplied dBase-format data files. GWIS3 produces data output in several formats suitable for insertion into reports or spreadsheets, and is also capable of generating basic descriptive statistics by analyte.

For further information, please visit our website, or call us at (850)921-9422.

http://www.dep.state.fl.us/water/monitoring/index.htm

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Florida Department
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Environmental Protection

STATUS MONITORING NETWORK

Background

The Florida Department of Environmental Protection has made a commitment to monitor Florida's Fresh water resources, including both surface water and ground water. In mid-1996, FDEP restructured its monitoring efforts. The Integrated Water Resource Monitoring (IWRM) committee was formed and assigned the task of developing a monitoring plan. The goal of the IWRM network is to provide scientifically defensible information on chemical, physical and biological characteristics of surface water bodies, major aquifer systems, and coastal waters of the state. The information is intended to be the basis for advising relevant Departmental and other agencies on the status of Florida's water quality. The purpose of the Status network is to characterize the environmental conditions of Florida's water resources and to determine how these conditions are changing over time.

The monitoring plan is divided into three 'tiers'. Tier I is represented by the Status and Temporal Variability networks. Tier II includes basin assessments and monitoring required for total maximum daily loads (TMDLs). TMDLs establish the maximum amount of a pollutant that a water body can assimilate without causing exceedances of water quality standards. Tier III includes monitoring tied to regulatory permits issued by DEP and the monitoring associated with evaluating the effectiveness of best management practices and TMDLs.

The Florida Marine Research Institute will assist in monitoring the state's estuarine and coastal waters, such as the Apalachicola Bay and Tampa Bay. The following discussion emphasizes the efforts underway to monitor the quality of Florida's fresh waters.

Administratively, Florida is divided into five Water Management Districts (WMDs) and six regional FDEP Districts. The WMDs and FDEP have developed a strong working relationship over the years. Accordingly, the IWRM Committee divided the state into five regions to coincide with the five WMDs. Each of these regions was further subdivided into four Reporting Units (RUs) which combined adjacent watersheds. The

FDEP staff collecting groundwater samples.

"FDEP has made a commitment to monitor fresh water resources, including both surface water and ground water."

four RUs within each WMD are the basis of the rotating basin philosophy of the IWRM program. The Tier I Status Network is designed to address questions at three different scales: 1) the state as a whole, 2) regions of the state, and 3) large drainage basins, or drainage basin complexes, within the state.

SFWMD staff sample a stream.

The overall state design provides for the sampling of all 20 of the RUs of Florida within a five-year period (2000-2004, 2005-2009 etc.). Each year, for each WMD, one of the four units will be sampled on a rotating basis. One unit from each WMD is selected at random to be sampled twice in the five-year period. Thus, for each WMD in the five-year cycle, three units will be sampled once and one will be sampled twice. The only constraints on the random selection are that the same RU cannot be sampled two years in a row and that in a five-year cycle, each RU must be sampled at least once.

FDEP has placed a considerable amount of effort on minimizing sampling and analytical error. To that end most WMDs are under contract to collect samples for the Status Network, to use one Quality Assurance plan, and be trained in specific sampling procedures. In addition, the Department's central laboratory is committed to conducting all of the sample analyses. During each year of sampling, within each RU, 30 random samples will be collected from six water resources, as well as samples for quality assurance purposes. The resources are: unconfined aquifers, confined aquifers, small lakes, large lakes, small streams, and large streams and rivers.

For any given year over 900 samples, including quality assurance samples, will be collected statewide. The indicators consist of both chemical and biological analytes.

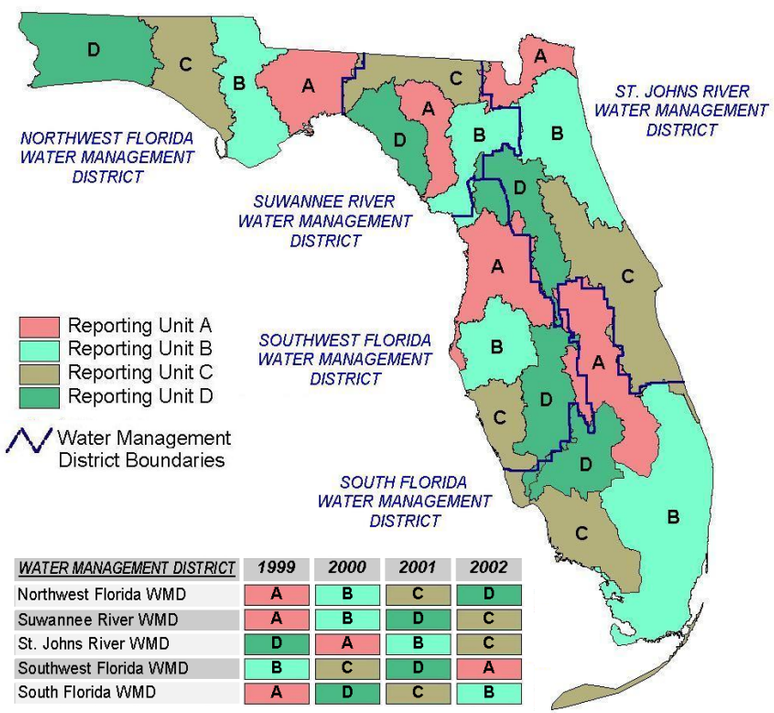
Because the same sampling and analytical methodologies will be used for all RUs, FDEP is able to make statewide water quality comparisons. For example, FDEP can compare the conditions of RU A to RU B, or compare RU A to RU A over time for any of the WMDs. FDEP will be able to assess issues of statewide concern in a consistent manner. Questions of statewide concern such as: "What are the concentrations of nutrients in Florida's surface and ground water?" and "Are these concentrations increasing or decreasing over time?" can by addressed.

Regional local governmental partners in water quality monitoring.

Periodically, as data are generated from the Status Network, a variety of reports will be generated and distributed to programs within FDEP, the WMDs, local governments, and to the public. At the end of each year, reports from the evaluation of the Status Network will be delivered to the Basin Planning and Management (BPM) Section of the Watershed Management Program. At the end of every five years, a Status Network report will also be given to the BPM Section for incorporation into a statewide assessment of Florida's water resources.

Status Network results present a relatively unbiased baseline assessment of current surface water and ground water conditions - useful when analyzing other monitoring data to determine whether or not those results are regional or local in nature. Data from the Status Network are also used as a part of Florida's semi-annual Water Quality Assessment 305(b) Report to USEPA, a requirement of the federal Clean Water Act. The 305(b) reports from all states are used by USEPA to inform Congress and citizens of state and national water quality conditions.

Basin Resource Indices (BRI), developed by the FDEP Ground Water Protection Section, have been used with Status Network ground water results to rapidly evaluate overall regional ground water quality. The BRI is based on the performance of a series of indicator analytes selected to highlight human health or aesthetics issues. Similar indices for surface water are under consideration.



WATER MANAGEMENT DISTRICT	1999	2000	2001	2002
Northwest Florida WMD	A	B	C	D
Suwannee River WMD	A	B	D	C
St. Johns River WMD	D	A	B	C
Southwest Florida WMD	B	C	D	A
South Florida WMD	A	D	C	B